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a coherent fiber bundle, disposed in said outer jacket, for transmitting a white light image of said sample and a Raman chemical image of said sample based on light scattered, reflected or emitted from said sample from one end of said fiber bundle proximate said sample to the opposite end of said fiber bundle distal said sample;

a laser bandpass filter positioned between said one or more laser illumination fibers and said sample for transmitting said laser light of said specific laser excitation wavelength and rejecting light of other wavelengths;

a laser rejection filter positioned between said sample and said coherent fiber bundle for transmitting wavelengths of light other than said specific laser excitation wavelength; wherein said white light images, said Raman chemical images and said Raman spectra are all collected through said coherent fiber bundle.

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• Please re-write Claim 3 as follows:

3. (Amended) The Raman imaging fiberscope of claim 2 wherein said laser bandpass and said laser rejection filters exhibit environmental insensitivity to temperature and humidity.

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• Please re-write Claim 4 as follows:

4. (Twice amended) The Raman imaging fiberscope of claim 2 further comprising one or more lenses positioned between said sample and said coherent fiber bundle.

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• Please re-write Claim 5 as follows:

5. (Amended) The Raman imaging fiberscope of claim 2 wherein said laser bandpass and said laser rejection filters are metal oxide dielectric filters.

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• Please re-write Claim 6 as follows:

6. (Amended) The Raman imaging fiberscope of claim 2 further comprising an optically transparent window disposed at the end of said outer jacket proximate said sample.

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• Please re-write Claim 7 as follows:

7. (Amended) The Raman imaging fiberscope of claim 6 wherein said window is composed of a material selected from a group comprising quartz, diamond and sapphire.

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- Please re-write Claim 8 as follows:

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8. (Amended) The fiberscope of claim 2 wherein said laser bandpass filter is spatially patterned into a first portion for filtering said laser light and a second, transparent portion.

- Please delete Claims 9, 10 and 12-17.

- Please re-write Claim 18 as follows:

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18. (Twice amended) The Raman imaging fiberscope of claim 2 further comprising:
a liquid crystal tunable filter imaging spectrometer coupled to the distal end of said coherent fiber bundle;
wherein said Raman chemical images are collected by tuning said liquid crystal tunable filter over a range of wavelengths and collecting images for each of said tuned wavelengths over a plurality of spatial locations on the surface of said sample, said spatial locations corresponding to individual fibers in said coherent fiber bundle.

- Please re-write Claim 20 as follows:

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20. (Twice amended) The Raman imaging fiberscope of claim 18 further comprising a CCD camera, coupled to the output of said liquid crystal tunable filter imaging spectrometer, for viewing said Raman chemical images.

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- Please re-write Claim 21 as follows:

21. (Twice amended) A Raman imaging fiberscope of claim 18 further comprising:
a video CCD; and
a video monitor for the viewing of white light images.

- Please re-write Claim 22 as follows:

22. (Twice amended) A Raman imaging fiberscope for the collection of white light images, Raman chemical images and Raman spectra from a sample comprising:
an outer jacket;
one or more white light illumination fibers, disposed in said outer jacket, for transmitting white light from a white light source to said sample;
one or more laser illumination fibers, disposed in said outer jacket, for transmitting laser light of a specific laser excitation wavelength from a laser source to said sample;

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a coherent fiber bundle, disposed in said outer jacket, for transmitting a white light image of said sample and scattered Raman light from said sample;
a laser bandpass filter positioned between said one or more laser illumination fibers and said sample for transmitting said laser light of a specific laser excitation wavelength and rejecting light of other wavelengths;
a laser rejection filter positioned between said sample and said coherent fiber bundle for transmitting wavelengths of light other than said specific laser excitation wavelength; and
a liquid crystal tunable filter imaging spectrometer.

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- Please re-write Claim 23 as follows:

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23. The Raman imaging fiberscope of claim 22 further comprising:

a mount for holding said fiberscope in proximity to said sample;
a link for directing the output of said fiberscope under white light illumination conditions to a video CCD for viewing on a video monitor;
a link for directing the output of said fiberscope under laser illumination conditions to a Raman spectrometer; and
a link for directing the output of said fiberscope under laser illumination conditions to said liquid crystal tunable filter imaging spectrometer.

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- Please delete Claim 24.

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- Please re-write Claim 25 as follows:

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25. (Twice amended) The Raman imaging fiberscope of claim 23 further comprising software and hardware for producing and displaying a Raman chemical image of said sample.

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- Please re-write Claim 27 as follows:

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27. (Twice amended) The Raman imaging fiberscope of claim 22 further comprising a spatial filter positioned between said sample and said coherent fiber bundle for controlling the angular field of view of said coherent fiber bundle.

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- Please re-write Claim 28 as follows:

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28. (Amended) A Raman imaging fiberscope for collecting white light images, Raman chemical images and Raman spectra from a sample comprising:

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one or more white light illumination fibers for transmitting white light from a white light source to said sample;
one or more laser illumination fibers for transmitting laser light of a specific laser excitation wavelength from a laser source to said sample;
a coherent fiber bundle;
a laser bandpass filter positioned between said one or more laser illumination fibers and said sample for transmitting said laser light of a specific laser excitation wavelength and rejecting light of other wavelengths; and
a laser rejection filter positioned between said sample and said coherent fiber bundle for transmitting wavelengths of light other than said specific laser excitation wavelength;
wherein said coherent fiber bundle transmits white light images, images composed of Raman scattered light and Raman spectra from a plurality of locations on the surface of said sample corresponding to individual fibers in said coherent fiber bundle.

• Please re-write Claim 29 as follows:

29. (Amended) The Raman imaging fiberscope of claim 28 wherein said laser bandpass and said laser rejection filters exhibit environmental insensitivity to temperature and humidity.

• Please re-write Claim 30 as follows:

30. (Amended) The Raman imaging fiberscope of claim 28 further comprising one or more lenses positioned between said sample and said coherent fiber bundle.

• Please re-write Claim 31 as follows:

31. (Amended) The Raman imaging fiberscope of claim 28 further comprising an outer jacket for enclosing said fiberscope, said outer jacket containing said white light illumination fibers, said laser illumination fibers and said coherent fiber bundle.

• Please re-write Claim 32 as follows:

32. (Amended) The Raman imaging fiberscope of claim 31 further comprising an optically transparent window disposed at the end of said outer jacket.

• Please re-write Claim 33 as follows:

33. (Amended) The Raman imaging fiberscope of claim 32 wherein said window is composed of a material selected from a group comprising quartz, diamond and sapphire.

• Please re-write Claim 34 as follows:

34. (Amended) The Raman imaging fiberscope of claim 28 wherein said laser bandpass filter is spatially patterned into a first portion for filtering said laser light and a second, transparent portion.

• Please re-write Claim 35 as follows:

35. (Amended) The Raman imaging fiberscope of claim 28 wherein said laser bandpass and said laser rejection filters are metal oxide dielectric filters.

• Please delete Claims 36-42.

• Please re-write Claim 43 as follows:

43. (Amended) The Raman imaging fiberscope of claim 2 further comprising a spatial filter positioned between said sample and said coherent fiber bundle for controlling the angular field of view of the fibers in said coherent fiber bundle.

• Please re-write Claim 44 as follows:

44. (Amended) The Raman imaging fiberscope of claim 28 further comprising a spatial filter positioned between said sample and said collection fibers for controlling the angular field of view of the fibers in said coherent fiber bundle.

• Please re-write Claim 45 as follows:

45. (Amended) The Raman imaging fiberscope of claim 28 further comprising:

- a mount for holding said fiberscope in proximity to said sample;
- a link for directing the output of said fiberscope under white light illumination conditions to a video CCD for viewing on a video monitor;
- a link for directing the output of said fiberscope under laser illumination conditions to a Raman spectrometer; and

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a link for directing the output of said fiberscope under laser illumination conditions to said liquid crystal tunable filter imaging spectrometer.

- Please delete Claim 46.

- Please re-write Claim 47 as follows:

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47. (Amended) The Raman imaging fiberscope of claim 45 further comprising software and hardware for producing and displaying a Raman chemical image of said sample.

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- Please re-write Claim 48 as follows:

48. (Amended) A Raman imaging fiberscope for collecting broadband images, Raman chemical images and Raman spectra from a sample comprising:

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one or more white light illumination fibers for transmitting white light from a white light source to said sample;

one or more laser illumination fibers for transmitting laser light of a specific laser excitation wavelength from a laser source to said sample;

a coherent fiber bundle;

a laser bandpass filter positioned between said one or more laser illumination fibers and said sample for transmitting said laser light of a specific laser excitation wavelength and rejecting light of other wavelengths;

a laser rejection filter positioned between said sample and said coherent fiber bundle for transmitting wavelengths of light other than said specific laser excitation wavelength;

one or more lenses positioned between said sample and said coherent fiber bundle;

a spatial filter positioned between said sample and said coherent fiber bundle for controlling the angular field of view of the fibers in said coherent fiber bundle;

an outer jacket for enclosing the fiberscope; and

a window disposed at the end of said outer jacket.

- Please delete Claims 49-51.